

REMARKS**A. Status of the Claims**

Claims 1-12 are pending in this application. New claims 9-12 have been added by this amendment.

New claim 9 recites that the organoborane is a trialkylborane. Support for this new claim can be found, for example, in line 7 on page 3 of the application.

New claim 10 recites that the organoborane is an alkyl cycloalkyl borane. Support for this new claim can be found, for example, in line 7 on page 3 of the application.

New claim 11 recites that the organoborane corresponds to Formula 1. Support for this new claim can be found, for example, in lines 10-15 on page 3 of the application.

New claim 12 specifies the amine. Support for new claim 12 can be found, for example, in paragraph 10 of US 2002/0058764 which is incorporated by reference in lines 16-20 on page 3 of the application.

B. Claim Rejections under 35 U.S.C. § 102(b)

Claims 1-3 and 5-8 were rejected as being anticipated by Bolt (US 4,764,489).

In order to maintain an anticipation rejection under 35 U.S.C. § 102, the prior art must disclose each and every element of the rejected claims with sufficient clarity to prove its existence in the prior art. Applicants respectfully submit that Bolt does not anticipate the claimed invention for at least the following reasons.

1. Bolt does not teach an organoborane/amine complex that is a polymerization initiator and which is inhibited from curing using an organoaluminum compound

The organoborane/amine complexes of the present invention are polymerization initiators (see for example, lines 10-16 on page 1 of the application). Such organoborane/amine complex polymerization initiators can cure on demand so that polymerization can be initiated when desired (see for example, lines 20-22 on page 1 of the application). However, such organoborane/amine complex polymerization initiators are known to have stability problems (see for example, lines 22-29 on page 1 of the application). The present invention attempts to solve this problem by providing an organoaluminum compound to inhibit curing of the organoborane/amine complex polymerization initiator as recited in claim 1.

In order to clarify that Applicant has discovered that an organoaluminum compound can be used as an inhibitor to inhibit the instability of an organoborane/amine complex polymerization initiator, Applicant has amended claim 1 to recite that the organoborane/amine complex is a polymerization initiator.

The Office cited Example 8 of Bolt to teach the reaction of triethylaluminum and a borane-ammonia complex. In addition to Example 8 cited by the Office, Applicant notes that Bolt provides two general formulas for "boron nitrogen compounds" that are useful in his invention (see col. 3, lines 36-49 of Bolt).

In contrast to the organoborane/amine complex polymerization initiator of the claimed invention, Bolt is directed to shapeable ceramic materials (see for example, col. 2, lines 43-50 of Bolt). The borane-ammonia complex of Example 8 of Bolt is not a polymerization initiator, in part because there are no monomers in Example 8 for polymerization. Example 8 of Bolt produces an inactive inorganic ceramic material, not a polymerization initiator as required by claim 1 of the present application. Applicant respectfully submits that Example 8 of Bolt does not anticipate the claimed invention.

In addition to the above, Applicant notes that compounds of the formulas shown in col. 3, lines 36-49 of Bolt can sometimes, in limited instances, be considered polymerization initiators in a broad sense. However, according to Applicant's current understanding, such limited instances occur when p and q are respectively 3. Such limited instances are only a small portion of the much larger number of compounds

encompassed by the formulas of Bolt, which primarily include compounds that do not function as polymerization initiators. However, in spite of the fact that some limited compounds of Bolt might function as polymerization initiators, Bolt does not anticipate the claimed invention, since Bolt does not teach that premature curing of this limited category of compounds that might be considered to be polymerization initiators can be inhibited by using an organoaluminum inhibitor as recited in claim 1. Thus, in summary, although compounds of the broad formulas of Bolt might include polymerization initiators in some limited instances, Bolt does not recognize that this limited group of compounds has the problem of premature curing, and that the premature curing can be addressed using an organoaluminum inhibitor as recited in claim 1. For instance, Example 8 of Bolt cited by the Office uses a borane-ammonia complex. Such a borane-ammonia complex might be considered to be a polymerization initiator in the broadest sense, but the borane-ammonia complex of Example 8 does not polymerize as explained above. Example 8 therefore does not use a polymerization initiator as required by the claims of the present invention.

Bolt does not appear to teach that an organoaluminum compound can be used to inhibit cure of an organoborane/amine complex polymerization initiator as recited in claim 1. It is respectfully submitted that claims 1-3 and 5-8 are not anticipated by Bolt.

C. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1 and 4 were rejected as being unpatentable over Bolt.

As discussed above, Bolt does not appear to teach that an organoaluminum compound can be used to inhibit cure of an organoborane/amine complex, which is a polymerization initiator, as recited in claim 1. Claim 1 and dependent claim 4 are therefore submitted to be patentable over Bolt.

D. Conclusion

In view of the actions taken and arguments presented, it is respectfully submitted that each and every one of the matters raised by the Office has been addressed by the present amendment and that the present application is now in condition for allowance.

Respectfully submitted,



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